

**Abstract**

**Treatment of Urethral Stricture using  
Sensated Ulnar Forearm Free Flap**

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In the treatment of urethral stricture, many problems still remain with the current methods making it a field of further exploration for reconstructive surgeon. Furthermore, when total or multiple strictures of the penile urethra exist, the methods of surgery become difficult due to a necessity for a long neourethra. Introduction of vascularized free flap has broadened the choice and improved the results of reconstruction for the urethra. The authors used a sensate ulnar forearm free flap in a patient with multiple penile urethral strictures for reconstruction. Uroflowmetry, 30 months after surgery, revealed that maximal flow rate was 15.5 ml/sec, average flow rate was 9.5 ml/sec, and voided volume was 157 ml. A urethrogram was performed 30 months postoperatively and a good result was achieved. The ulnar forearm free flap used by the authors are thin and pliable and is good for providing sufficient length to reconstruct the neourethra for a long urethral defect.

**Key Words :** Urethral stricture, Sensated ulnar forearm free flap

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vicryl (Fig. 5).

35 1994 11

12 , 6

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(Fig. 1).

1989

3

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EIU(endoscopic internal urethrotomy)

. 1997 3

(dartos

fascia)

(Bucks fascia)

1cm

12 cm

(Fig. 2).

2 cm

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15 cm

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16×5 cm

1 cm ,

0.5 cm

14×4 cm

12 , 6

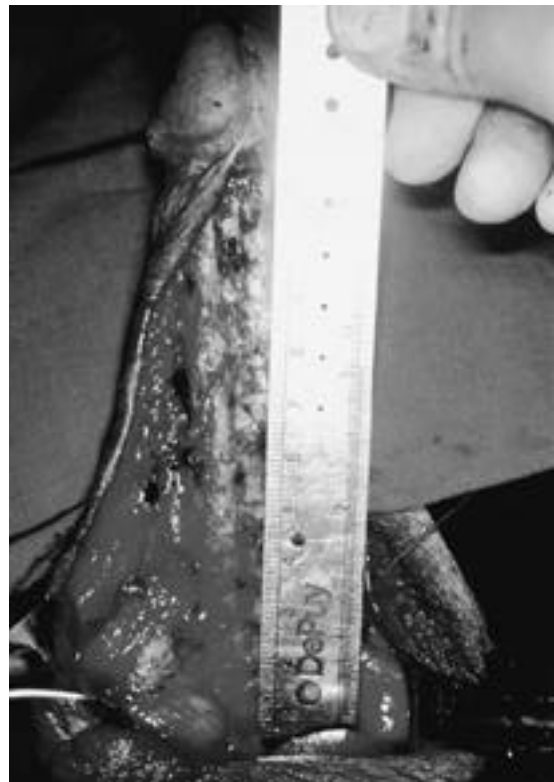
(Fig. 3, 4).

17 french

#5-0 PDS



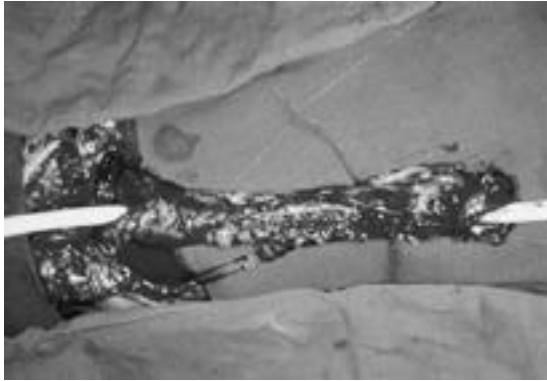
**Fig. 1.** Preoperative urethrogram. Note multiple strictures on whole anterior urethra.



**Fig. 2.** After total resection of anterior urethra except 1 cm from meatus, the defect was measured about 12 cm in length.



**Fig. 3.** Designing ulnar forearm flap including medial antebrachial cutaneous nerve. Multiple oblique lines around the flap will be deepithelialized.



**Fig. 5.** Neo-urethral formation after insertion of 14 French foley catheter.



**Fig. 4.** Ulnar forearm flap was elevated. Two triangular flaps on each end were made for prevention of contracture of connected portions between urethra and neo-urethra ( : ulnar artery, : venae comitantes and basilic vein, N: medial antebrachial cutaneous nerve).



**Fig. 6.** 30 months after surgery. Showing the active urination.

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2

(Fig. 6). 30

(Fig. 7)

30

15.5 ml/sec, 9.5 ml/sec, 157 ml (Fig. 8).

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1-5

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